

## STUDIES IN THE MELYRIDÆ, No. 7

BY FRANK E. BLAISDELL

*San Francisco, California*

The intensive study of the different species of *Listrus* shows without doubt that, although a monotonous habitus prevails, good characters can be recognized for their separation. It is true that their small size render the characters relatively obscure and demand patient examination for their elucidation. Such characters as the modification of the fifth ventral abdominal segment at apex in certain males, and the difference or similarity of body form, or of the antennæ, in the two sexes, readily present taxonomic possibilities. Besides, in the males of several species the femora are more or less swollen or inflated and the degree of arcuation of the metafemora, are striking characters under the binocular microscope or a strong hand lens.

The many new species coming to hand necessitate a somewhat detailed description of each, so that the differences and resemblances can be visualized, otherwise the student would be confused for want of explicit differential characters. It is not the fault of the systematist that there is a poverty of aids to identification of the species. Most departments of Science are notoriously poorly endowed, otherwise illustrations would not be turned down when their presence is a real necessity. There is yet a large area of territory to be collected over west of the Rocky Mountains, where *Listrus* and *Trichochrous* are the predominating melyrids.

The following new species have been at hand for several years and repeated studies have served only to emphasize their specific validity:

***Listrus longicornis* Blaisdell, new species**

Form elongate, parallel, small in size and quite similar in the sexes, scarcely three times as long as wide. Color black; legs pale rufous, second and usually the third joint of antennæ of similar color, other joints and mouth-parts more or less piceous. Luster dull and feebly æneous.

Pubescence moderately dense not entirely obscuring the surface, rather coarse, paler hairs cinereous. Maculation not sharply defined and formed by fuscous hairs, basal, post-basal and apical maculæ

variable in size; a submedian and subapical fascia sometimes discernible, generally there is more or less diffusion of the fuscous hairs. Lateral pronotal and elytral fimbriæ light cinereous in color, moderately short and subequal. Hairs of the ventral surface finer and longer, cinerous, denser on the parapleuræ; white and dense on the scutellum.

Head about as long as wide, across the eyes much wider than the pronotal apex; muzzle relatively small and short. Eyes strongly convex and prominent; frons broadly and feebly impressed, densely punctate, punctures not coarse. Antennæ slender, long, attaining the pronotal base at middle, very slightly and gradually incrassate, joints 3 to 7 very feebly compressed; joint 2 oval and a little longer than wide, 3 elongately subcylindrical, twice as long as wide, slightly longer than 4, the latter feebly triangular, 5 longer than 3 and more triangular, wider than 4 or 6; joints 6, 7 and 8 subequal in size, feebly triangular with angle obtusely rounded, 9 and 10 about as long as wide, more evenly triangular, 11 elongate obovate, as long as 6 and 7 taken together.

Pronotum as wide as the elytral base, about a third wider than long, widest at basal third where the sides are strongly arcuate; thence to the rounded apical angles straight and moderately convergent as viewed from above, posteriorly broadly rounded into the base, the latter broadly arcuate; lateral margin with small serrulations; apex subtruncate in circular arc; disk rather evenly and strongly convex, noticeably declivous and somewhat compressed antero-laterally, densely indentato-punctate.

Elytra parallel in both sexes, sides straight to the posterior third, thence arcuate to the subparabolically rounded apex; feebly convex on the dorsum, more strongly at the sides; humeri obtusely rounded not swollen; surface slightly undulate, punctures coarser than on the pronotum and slightly impressed.

Abdomen feebly convex, finely punctate; fifth segment a half longer than the fourth. Legs moderate in length and stoutness. Metafemora not inflated nor arcuate, widest at middle.

Male: Fifth ventral segment subtruncate at apex; abdomen feebly convex. Female: Fifth segment rounded at apex, but little longer than that of the male. Abdomen more convex.

Length (types), 2-2.4 mm.; width .7-.8 mm.

Holotype, male, No. 2566, and allotype, female, No. 2567, Mus. Calif. Acad. Sci., and two paratypes, collected by Dr. A. Fenyes, at **Pasadena, California**. These are in the Blaisdell collection at the California Academy of Sciences. More recently specimens have been collected at Los Angeles by Prof. W. S. Blatchley.

*Longicornis* is related to *famelicus* Casey. It is distinct in the parallel form of both sexes and feeble differential secondary sexual characters. In coloration it resembles the æneous individuals of *extricatus* Casey and *variegatus* Casey. In all of those species the female is more or less obovate due to the elytra being widest across the apical third. In the male of *longicornis* the fifth ventral segment is unusually long for that sex, as a result the segment is more briefly truncate at apex. The pronotal disk is densely indentato-punctate in *extricatus*, *famelicus*, *balteellus* and *longicornis*. In *luteipes* the central area of the pronotal disk is sparsely punctate and the interstitial surface is smooth and shining.

***Listrus pictipes* Blaisdell, new species**

Form elongate oblong-ovate to ovate, dissimilar in the sexes, small in size, less than three times as long as wide, head and prothorax relatively small. Color black; legs and joints 2 to 5 of antennæ pale rufous; distal antennal joints and mouth-parts more or less piceous. Luster more or less shining, with a slight purpureo-æneous tinge.

Pubescence not obscuring the general surface, somewhat coarse and dull cinereous in color. Maculation quite distinct, with slender brownish hairs; basal and post-basal maculæ small and somewhat confused, the parascutellar usually evident, the apical not distinct or absent; median and subapical fasciæ well marked. There may be some diffusion of the brownish hairs along the suture between the fasciæ. Scutellum not albopubescent. Lateral pronotal fimbriæ short, those of the elytra slightly longer. Central area of the pronotum clothed with brownish hairs, intermixed with cinereous hairs laterally; hairs of the ventral surface finer and longer.

Head as long as wide, muzzle small; eyes moderately large, quite strongly convex and prominent. Frons flat, punctures small, well defined and separated. Antennæ similar in the sexes, not compressed, rather stout, notably gradually incrassate and extending to a point on a line with the pronotal base; joint 2 subglobular, 3 slender and cylindrical, about as long as 4, the latter feebly triangular, 5 triangular and scarcely more prominent anteriorly than 6 and 7 which are subglobular, 8 and 9 stouter moniliform, as long as wide, 10 similar and feebly transverse, 11 obovate, less than twice as long as wide.

Pronotum about a fourth wider than long, widest at basal third, where the sides are moderately arcuate, thence moderately convergent to the rounded apical angles; posteriorly rounding into the broadly arcuate base, angles absent; lateral margins finely serrulate; apex subtruncate in circular arc; disk quite strongly convex, declivous

antero-laterally, appearing slightly compressed; punctures of the central area well defined and separated by a distance equal to one or two times their diameter; interstitial surface glabrous, laterally densely indentato-punctate.

Elytra at base distinctly wider than the pronotum, humeri evenly rounded, scarcely tumid; sides feebly arcuate and divergent to about apical third, thence arcuate with the parabolically rounded apex; disk moderately convex to slightly flattened on the dorsum, more rapidly convex and declivous laterally behind the humeri, punctures rather coarse and the surface somewhat undulato-rugulose, less so apically.

Abdomen finely punctate, very moderately convex. Legs moderate; metafemora similar in the sexes, not arcuate nor inflated.

Male: Oblong-ovate, sides feebly arcuate. Fifth ventral abdominal segment broadly truncate at apex and noticeably impressed at middle apically, otherwise unmodified. Female: Ovate, elytra slightly inflated, sides more arcuate. Fifth ventral rounded at apex.

Length (types) 2.0-2.4 mm.; width .8-.9 mm.

Holotype, male, No. 2568, and allotype, female, No. 2569, Mus. Calif. Acad. Sci., in the Blaisdell collection, taken by Henry Dietrich, May 23, 1920, at **Northfork, Tulare County, California**. Paratypes in the collection of Mr. Dietrich, at Appleton, N. Y.

*Pictipes* belongs to the *annulatus* group. It may best be differentiated by a synoptical statement:

- |   |                        |
|---|------------------------|
| Elytra with three well formed dark fasciæ.....  | 1                      |
| Elytra with two dark fasciæ, basally the macules irregularly formed; antennæ comparatively robust; legs pale rufous. Fifth ventral of the male noticeably impressed at middle apically.....   | <i>pictipes</i> n. sp. |
| 1. Legs pale rufous.....  | 2                      |
| Legs piceous or blackish; form stouter and oblong (male), or oblong-ovate (female).....   | <i>annulatus</i> Casey |
| 2. Dark fasciæ of elytra tending to diffuse along the suture, the median widest; pronotum less narrowed anteriorly, marginal serrules sharp and well formed, more widely spaced; fourth and fifth antennal joints sharply triangular, angles prominent anteriorly; fifth ventral more densely pubescent apically. Colorado Desert and Utah..... | <i>martini</i> Blais.  |
| Dark fasciæ not diffusing along the suture; form a little less robust, oblong-oval; marginal serrules small, obtuse and less widely spaced; fourth and fifth antennal joints distinctly triangular; sides of pronotum more broadly arcuate and less rapidly convergent anteriorly. Colorado.....  | <i>rubripes</i> Casey  |



**Listrus falli** Blaisdell, new species

Form oblong-oval, rather robust, quite similar in the sexes, about three times longer than wide. Color black; distal half of tibiæ and tarsi rufous; antennæ with joints 2-4 rufo-piceous; tips of labial palpi and apex of labrum slightly pale. Luster faintly purpureo-æneous, somewhat shining.

Pubescence not obscuring the general surface, not coarse, moderate in length and dull cinereous in color. Maculation quite faintly defined, the hairs piceous. Maculæ discrete, moderate in size, the humeral and post-basal at middle of each elytron discernible; submedian and subapical fasciæ while sometimes entire are usually dissolved into two macules on each side of suture, the apical not noticeable. Maculæ of the pronotum more or less obscure, discernible as faint clouds, the central one sometimes more or less oblong, lateral vittæ divided into small spots. Lateral pronotal and elytral fimbriæ cinereous, moderate in length. Hairs of the ventral surface abundant, slender, moderately long and dull cinereous.

Head about as long as wide, one-third of the eye on each side wider than the pronotal apex. Eyes large, moderately strongly convex and prominent. Frons plane to feebly convex, coarsely and densely punctate. Antennæ moderately long, extending a little beyond the pronotal base at middle, moderate in thickness, noticeably incrassate distally, feebly compressed and similar in the sexes; joint 2 oval; 3, 4 and 5 subequal in length, feebly elongate; 2 somewhat obconical, 4 and 5 triangular, the latter more strongly so, apices almost transverse; 5 a little more prominent anteriorly; 6, 7 and 8 as long as wide, triangular; 9 and 10 similar in form, feebly transverse and a little more robust; 11 obovate, about a half longer than wide, slightly stouter.

Pronotum a little narrower than the elytral base, a third wider than long, widest a little behind the middle; apex subtruncate in circular arc; sides broadly and quite evenly arcuate, noticeably convergent anteriorly, apical angles moderately broadly rounded, posteriorly rounding into the broadly and evenly arcuate base; lateral margin obsoletely serrulate, 4 or 5 serrules present posteriorly; disk quite evenly convex, central area with sharply defined punctures, that are separated by a distance equal to one or two times their diameter, interstitial surface smooth and shining, more or less indentate, laterally very densely indentato-punctate.

Elytra oblong, sides subparallel, feebly arcuate, very little wider posteriorly, arcuately rounding into the parabolically rounded apex; humeri slightly tumid, limited within by a noticeable intra-humeral impression; disk almost evenly convex, rather abruptly declivous laterally behind the humeri; punctures slightly larger than on the

pronotum, separated by a distance equal to one or two times their diameter, finer toward apex; parascutellar area slightly tumid.

Abdomen finely punctate. Legs relatively small; meta-femora straight, not noticeably arcuate, attaining the middle of the third segment.

Male: Slightly more parallel than the female; fifth ventral abdominal segment broadly sinuato-truncate at apex. Female: Slightly broader posteriorly; fifth ventral broadly rounded at apex.

Length (types) 3.0-3.3 mm.; width 1.2-1.3 mm.

Holotype, male, No. 2570, and allotype, female, No. 2571, Mus. Calif. Acad. Sci., and two female paratypes, collected by Dr. A. Fenyès, at Bishop, Inyo County, California, in the Blaisdell collection.

*Falli* belongs to the *difficilis* group, although the glabrous, shining surface of the central pronotal disk is more or less feebly, but distinctly indentated, it must be placed according to the author's synopsis<sup>1</sup> with *vestitus* Blais. and *incertus* Casey, where the interstitial surface of the pronotum shows the same type of sculpturing; the tibiæ and tarsi are similarly colored. In both of these species the maculation and the pronotal serrulation are distinct. In all three species the antennæ are quite similar. The type region for *vestitus* is Bear Lake, San Bernardino County, California. *Incertus* is a smaller species that occurs most abundantly on the blossoms of the *Ceanothus* in the San Francisco Bay region.

#### ***Listrus lanei* Blaisdell, new species**

Form elongate oblong, parallel, feebly narrowed anteriorly, about three times as long as wide. Color black; tarsi piceous, second antennal joint piceo-testaceous, fourth and fifth more or less so.

Pubescence moderately long, dense and albo-cinereous in color. Maculation sharply defined, hairs nigro-piceous in the intensely black maculæ, which are rounded and tend to vary in size, sometimes a submedian and a subapical fascia are more or less evident; humeral maculæ narrow and elongate, the parascutellar a little posterior and lateral to the scutellum, the post-basal at middle of elytra, the apical small to almost obsolete, none observed to attain margin or suture. Pronotal central figure dissolved into four, lateral vittæ broken into two each, rarely the figures are intact. Pronotal lateral fimbriæ

<sup>1</sup> Stanford Univ. Publ., n. s., Biological Sciences, Vol. 1, p. 177, June, 1921.

moderately short, the elytral a little longer. Hairs more abundant, longer and finer on ventral surface.

Head as long as wide, about one-third of each eye wider than the pronotal apex, muzzle relatively small, eyes moderately large and convex. Frons plane to feebly and broadly impressed, densely and rather coarsely punctate. Antennæ moderately long, extending a little beyond the pronotal base at middle, moderately and gradually incrassate; joints 4 to 7 noticeably compressed; 2 oval, a fourth longer than wide; 3, 4 and 5 elongate, 3 and 4 subequal, 5 slightly longer, scarcely wider than 4 or 6, 3 cylindrical, 4 obconico-triangular, 5 triangular, 6 about as wide and triangular, 7, 8 and 9 a little longer than wide, less triangular and more rounded, 9 and 10 subequal in length, 10 a little thicker and more rounded, 11 short obovate and about a half longer than wide.

Pronotum about a third wider than long, greatest width equal to that of the elytral base; apex subtruncate in circular arc; widest at basal third, where the sides are moderately arcuate, thence to apex nearly straight, angle rounded; posteriorly more or less briefly sinuate before the more or less broadly dentiform angles; marginal serrules small and acute; base broadly arcuate; disk evenly convex, more or less densely indentato-punctate in the central area, interstices smooth and shining.

Elytra oblong, about twice as long as wide, sides parallel; humeri moderately broadly rounded, not tumid; disc less than moderately convex on dorsum, arcuately declivous laterally beyond the humeri, very gradually declivous apically; apex rather gradually formed and more narrowly rounded; punctures moderately coarse, separated by a distance equal to one or two times their diameter, surface feebly undulate, sculpturing finer apically.

Abdomen finely punctate. Legs of moderate length, femora somewhat thickened, not noticeably inflated, the metafemora moderately arcuate.

Male: Parallel, antennæ as described above; fifth ventral abdominal segment truncate at apex where the pubescence is longer and quite abundant. Female: Sides of body noticeably arcuate, antennæ a little more slender, otherwise similar; sides of pronotum a little more arcuate anteriorly, elytra a little more convex on dorsum. Fifth ventral broadly rounded at apex.

Length (types) 3.2-3.6 mm.; width 1.2-1.4 mm.

Holotype, male, No. 2572, and allotype, female, No. 2573, Mus. Calif. Acad. Sci., in the author's collection. Paratypes in the collection of Merton C. Lane, Toppinish, Washington, and that of the author.

Type locality. **Lind, Washington.** Collected May 15, 1922, by Mr. Lane, after whom the species is named. Paratypes have been taken at Kamela, Oregon.

*Lanei* is a very pretty species and belongs to the *interruptus* group. The fifth ventral abdominal segment is less strongly modified than in other species of the section. The pronotal sculpturing is subject to some variation, being in part very glabrous and in part indented. The maculation is strong, macules intensely black and more or less rounded, rarely coalescing to form two fasciæ as mentioned above. In *salicis* Blais. the macules tend to atrophy. In *foxi* Blais. the modification of the fifth ventral is much stronger, the femora are remarkably swollen and the metafemora markedly arcuate. In the author's synopsis<sup>2</sup> *lanei* takes its place with *fulvipilosus* Blais. and *cervicalis* Blais. In *fulvipilosus* the antennæ and tarsi are testaceous, and the maculation less strong. *Cervicalis* is more robust and the maculæ tend to unite to form from three to five fasciæ. In *lanei* the elytral apex is more gradually formed and therefore longer and less broadly rounded.

---

#### NOTE ON THE HABITS OF LIXUS BLAKEÆ CHITTEN.

BY DORIS H. BLAKE

*Bureau of Entomology, Washington, D. C.*

Lagunita, a small lake on the campus of Stanford University, California, is drained during the summer, leaving the lake bed entirely dry. By the 21st of June, 1927, the place, with the exception of a few pools still standing in the deepest portions, had become dry enough to walk about on. At that time a marsh smartweed (*Polygonum muhlenbergii* (Meisn.) S. Wats.) was springing up in numerous patches over the lake bed and beginning to send long vigorous runners over the ground. On a patch of this, uncovered earliest by the water, I found a colony of *Lixus mucidus* Lec. and with it a smaller and more slender species which has been described by Dr. F. H. Chittenden<sup>1</sup> as *Lixus blakeæ*. Both species were observed ovipositing on the Polygonum. Although I did not pay particular attention to the place of oviposition of the two species, I did observe in several instances that females of *Lixus mucidus* oviposited at the base of the long running stems. Later, owing to the extreme hardness of the ground when the earth had become sun-baked,

---

<sup>2</sup> Stanford Univ. Publ., n. s., Biological Sciences, Vol. 1, p. 180, June, 1921.

<sup>1</sup> Chittenden, F. H., Proc. Ent. Soc., Wash., Vol. 30, No. 5, May, 1928, p. 90.